

**Notice of Allowability**

Application No.

09/739,380

Examiner

Corey P Chau

Applicant(s)

KATO ET AL.

Art Unit

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All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/19/2000.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☒ The drawings filed on 19 December 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 12/19/00, 2/25/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. The application has been amended as follows:

Abstract: The abstract exceeded 150 words, did not have parenthesis around reference number and was not one paragraph.

Abstract as bee changed to --A sound image localization apparatus that can support an input signal of plurality of sampling frequencies while being small in circuitry size is provided. A basic sound image localizer (12) processes a signal within a frequency band [0 kHz to 24 kHz] for sound image localization. A sound image localizer (13a) processes a signal within a frequency band [24 kHz to 48 kHz] for sound image localization. A sound image localizer (13b) processes a signal within a frequency band [48 kHz to 96 kHz] for sound image localization. An input sampling frequency detector (11) detects a sampling frequency of an input signal. A frequency band decomposing part (14) decomposes the input signal into the above frequency bands. Frequency band reconstructing parts (15a) and (15b) each reconstruct the signals after sound image localization.--

### REASONS FOR ALLOWANCE

3. The following is an examiner's statement of reasons for allowance: None of the prior art teaches or makes obvious, a sound image localization apparatus comprising an input sampling frequency detector for detecting the sampling frequency of said sound signal; a basic sound image localizer that carries out sound image localization on a signal within a frequency band that is lower than a Nyquist frequency of the sampling frequency  $f_1$ ; a plurality of sound image localizers that carry out sound image localization on a signal within a frequency band between a Nyquist frequency of said sampling frequency  $f_{m-1}$  and a Nyquist frequency of the sampling frequency  $f_m$ ; a frequency band decomposing part for decomposing, based on a detection result of said input sampling frequency detector; and a plurality of frequency band reconstructing parts for reconstructing, based on the detection result of said input sampling frequency detector.

None of the prior art teaches or makes obvious, a sound image localization apparatus an input sampling frequency detector for detecting the sampling frequency of said sound signal; a basic sound image localizer that carries out sound image localization on a signal within a frequency band that is lower than a Nyquist frequency of the sampling frequency  $f_1$ ; a plurality of sound image localizers that carry out sound image localization on a signal within a frequency band between a Nyquist frequency of said sampling frequency  $f_1$  and a Nyquist frequency of the sampling frequency  $f_m$ ; a frequency band decomposing part for decomposing, based on a detection result of said input sampling frequency detector; and a plurality of frequency band reconstructing

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parts for reconstructing, based on the detection result of said input sampling frequency detector.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P Chau whose telephone number is (703)305-0683. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Sinh can be reached on (703)305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 18, 2005

  
XU MEI  
PRIMARY EXAMINER